

# BS7870-4.10 19/33kV Copper Single Core Unarmoured LSZH Cable



Eland Product Group: D60

## APPLICATION

Medium Voltage cable for power distribution and power supply stations used in Utility and Industrial applications, for the rated voltage of 19/33 (36)kV. Optional conductor waterblocking and longitudinal waterblocking available.

## CHARACTERISTICS

**Voltage Rating** U<sub>0</sub>/U (Um)  
19/33 (36)kV

**Temperature Rating**  
Conductor maximum operating temperature: 90°C  
Maximum short-circuit temperature: 250°C

**Minimum Bending Radius**  
10 x overall diameter

## CONSTRUCTION

**Conductor**  
Class 2 Stranded Copper

**Conductor Screen**  
Semi-conductive XLPE (Cross-Linked Polyethylene)

**Insulation**  
XLPE (Cross-Linked Polyethylene)

**Insulation Screen**  
Semi-conductive XLPE (Cross-Linked Polyethylene) - Fully bonded

**Paper separation tapes**

**Metallic Screen**  
Copper wires - number/diameter of wires dependent on required earth fault rating  
*Optional copper equalising tapes applied helically*

**Sheath**  
LSZH (Low Smoke Zero Halogen)

**Sheath Colour**  
● Black

## STANDARDS

IEC 60502-2, BS 7870-4.10, BS EN 60754-1/2,  
BS EN 61034-1/2, BS EN 60332-1-2

## THE CABLE LAB®

AN ISO/IEC 17025 AND IECEE CBTL ACCREDITED FACILITY

Our world-class testing facility assures the quality and compliance of this cable through a continuous and rigorous testing regime.



## SUSTAINABILITY COMMITMENT

We are on a journey to Net Zero.

We've committed to near-term emissions reductions and a net-zero target with the Science Based Targets initiative and we're a signatory to the United Nations Global Compact Sustainable Development Goals.

Learn more about embodied carbon and our carbon emissions reduction actions, our comprehensive recycling services, and wider ESG activities for sustainable operations at: [www.elandcables.com/company/about-us/esg-sustainability](http://www.elandcables.com/company/about-us/esg-sustainability)



## REGULATORY COMPLIANCE

This cable meets the requirements of the RoHS Directive 2011/65/EU. RoHS compliance has been tested and confirmed by The Cable Lab® as meeting the requirements of the BSI RoHS Trusted Kitemark™.





## DIMENSIONS

ELAND PART NO.	NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	NOMINAL DIAMETER mm			MAXIMUM PULLING TENSION ON CABLE kg	NOMINAL WEIGHT kg/km
			Over Conductor	Over Insulation	Overall		
D600112BK000	1	70	9.8	27.0	34.1	350	1560
D600113BK000	1	95	11.5	28.7	36.1	475	1880
D600114BK000	1	120	12.8	30.0	37.5	600	2160
D600115BK000	1	150	14.3	31.5	39.3	750	2480
D600116BK000	1	185	15.9	33.1	41.0	925	2860
D600117BK000	1	240	18.4	35.6	43.8	1200	3530
D600118BK000	1	300	20.5	38.1	46.6	1500	4220
D600119BK000	1	400	23.2	41.2	50.2	2000	5150
D600120BK000	1	500	26.2	44.2	53.4	2500	6250
D600121BK000	1	630	30.3	48.3	58.0	3150	7740
D600122BK000	1	800	34.7	52.7	66.0	4000	9630
D600123BK000	1	1000	38.0	57.3	71.0	5000	12200

## ELECTRICAL CHARACTERISTICS

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	MAXIMUM CONDUCTOR DC RESISTANCE AT 20°C W/km	MAXIMUM CONDUCTOR AC RESISTANCE AT 90°C W/km	CAPACITANCE μF/km	INDUCTANCE AT 50Hz mH/km	CURRENT CARRYING CAPACITY (Laid in trefoil) Amps		
						In air 25°C	Single way ducts	Buried 15°C
1	70	0.2680	0.3420	0.14	0.43	320	270	270
1	95	0.1930	0.2470	0.16	0.41	390	320	320
1	120	0.1530	0.1960	0.17	0.40	445	360	360
1	150	0.1240	0.1590	0.18	0.38	510	405	410
1	185	0.0991	0.1280	0.20	0.37	580	445	460
1	240	0.0754	0.0980	0.22	0.36	680	520	530
1	300	0.0601	0.0790	0.25	0.36	770	570	600
1	400	0.0470	0.0630	0.26	0.33	895	630	690
1	500	0.0366	0.0510	0.29	0.32	1020	700	760
1	630	0.0283	0.0420	0.32	0.31	1160	780	850
1	800	0.0221	0.0350	0.35	0.30	1290	860	930
1	1000	0.0176	0.0300	0.38	0.29	1430	920	1010

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	SHORT-CIRCUIT CURRENT 1SECOND		
		90°C to 250°C kA	35mm <sup>2</sup> COPPER WIRE SCREEN 80°C to 250°C kA	50mm <sup>2</sup> COPPER WIRE SCREEN 80°C to 250°C kA
1	70	9.7	4.8	8.2
1	95	13.5	4.8	8.2
1	120	17.1	4.8	8.2
1	150	21.0	4.8	8.2
1	185	26.3	4.8	8.2
1	240	34.6	4.8	8.2
1	300	43.4	4.8	8.2
1	400	57.7	4.8	8.2
1	500	72.1	4.8	8.2
1	630	90.7	4.8	8.2
1	800	115.1	4.8	8.2
1	1000	143.8	4.8	8.2